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US Oil Spill Response Equipment at a Glance



November 1997



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US Oil Spill Response Equipment at a Glance.

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Introduction

Welcome to the US Oil Spill Response Equipment at a Glance. By listing state by state equipment totals in several general categories, the goal of this guide is to provide a “big picture” look at the location of different types of oil spill response equipment throughout the United States. It is intended to be a quick reference guide for anyone who may need information on, or be interested in, our nation’s response capabilities. We hope this proves to be a useful tool for government and private sector planners, responders, and researchers to aid in making decisions concerning the nation’s response posture.

Copies of this document and will be available on the internet at the following address: <http://www.uscg.mil/hq/g-m/nmc/genpub.htm> under “Studies of Interest from CG Sources”.

Please address comments, concerns and suggestions to:

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Criteria

This guide is broken down into 5 sections representing the following major equipment categories:

- Boom
- Skimmers
- Temporary Storage
- Vessels with Storage
- Vacuum Systems

Each equipment section contains an information sheet, state by state totals of private sector and federal assets, and maps showing various information based on these totals.*

The private sector data for this report was compiled based on information gathered from 1218 individual resource sites nationwide submitted by 120 privately owned Oil Spill Removal Organizations (OSROs) and is accurate as of February 1997. To insure that nothing is counted more than once due to multiple contracts, private sector equipment totals include only owned equipment.

The federal data includes equipment from major federal pre-positioned equipment sites (5 Navy SUPSALV and 22 Coast Guard) located nationwide. This guide only provides information on major federal equipment sites, and does not include equipment from Coast Guard Marine Safety Offices and smaller pre-positioned Navy sites.

Figure 1 below gives a perspective of the location of the equipment sites throughout the United States.

Resource Site Locations

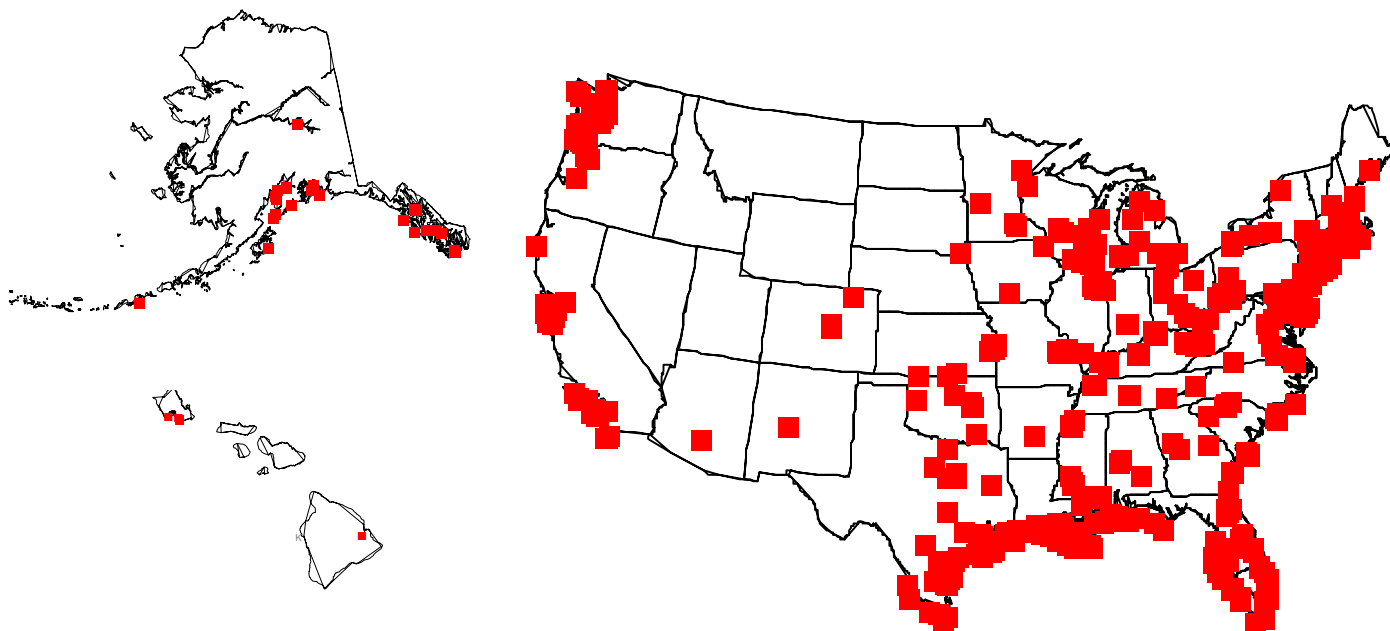


Figure 1: Based on data as of Feb 97

* Data from Puerto Rico and Guam are included in the state by state totals, however limitations in software prevented us from being able to map these locations.

Boom

Information

Boom: Includes containment, protective, and fire boom. It does not include absorbent or consumable types.

Boom Height: Height of boom perpendicular to the waterline, includes skirt and freeboard, measured in inches.

Boom Length: Length of boom parallel to the waterline, measured in feet.

Total Boom: Total of federal and private boom.

Data is shown in total feet available nationally and by state for three ranges of boom heights as follows:

- 6-18 inches in height : Correlates with boom primarily used in the river/canal environment.
- 19-41 inches in height: Correlates with boom primarily used in the inland environment.
- >42 inches in height: Correlates with boom primarily used in the ocean environment.

In addition, the maps graphically show boom quantities in five color ranges, with darker colors indicating the highest boom totals and lighter colors indicating the lowest. The numbers in parentheses in the legend indicate the number of states which fell within each range.

No federal assets were recorded for 6-18 and 19-41 inch boom categories.

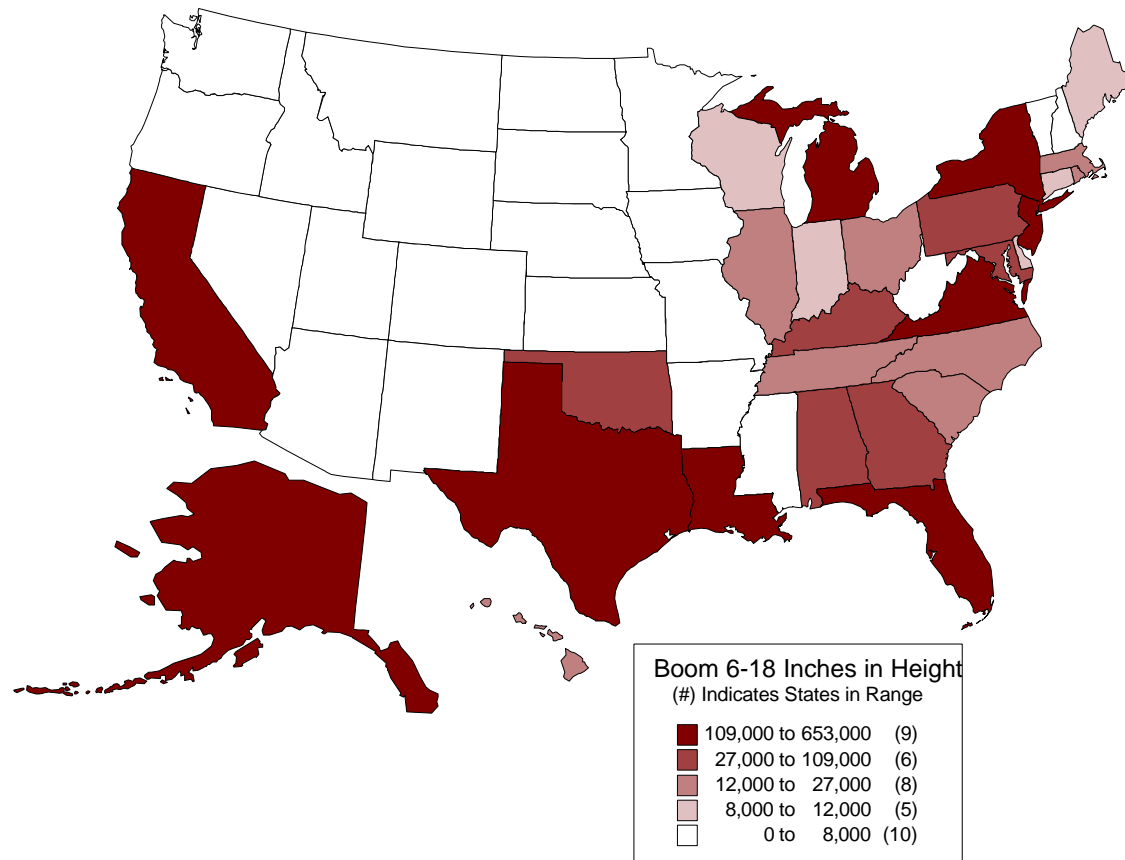
Boom by State, 6 to 18 Inches in Height

Totals are based on data as of February 1997.

State	Total Boom (ft)
AK	218,013
AL	45,750
CA	112,600
CO	1,400
CT	9,000
DE	9,900
FL	431,390
GA	90,800
Guam	9,000
HI	25,000
IL	14,900
IN	10,000
KS	6,050
KY	55,800
LA	418,100
MA	23,200
MD	71,600
ME	11,700
MI	109,000
MN	4,200
MO	6,000
MS	6,450
NC	26,625
NH	2,400
NJ	357,200
NY	133,950
OH	20,050
OK	81,100
OR	2,100
PA	103,225
PR	6,000

State	Total Boom (ft)
RI	12,000
SC	24,000
SD	1,000
TN	20,300
TX	652,238
VA	313,550
WA	1,600
WI	8,400
WV	600
National Total:	3,456,191 ft

Boom 6 to 18 Inches in Height

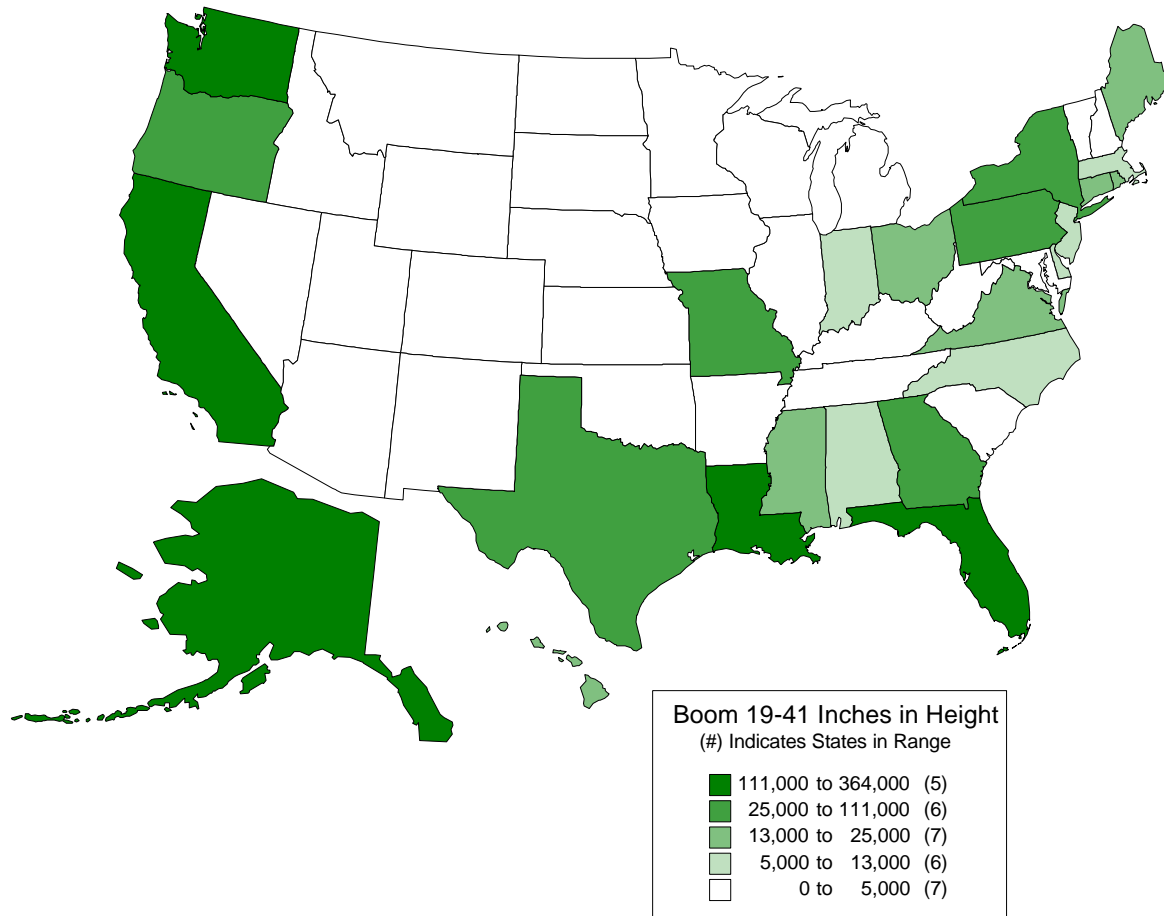


Boom by State, 19-41 Inches in Height

Totals are based on data as of February 1997.

State	Total Boom (ft)
AK	225,825
AL	5,100
CA	363,874
CO	2,400
CT	24,800
DE	5,600
FL	178,600
GA	51,000
Guam	6,600
HI	17,500
IL	2,400
IN	5,100
LA	121,700
MA	9,300
MD	2,200
ME	22,100
MI	800
MO	26,000
MS	14,000
NC	7,000
NJ	7,600
NY	110,500
OH	13,350
OR	59,600
PA	71,750
PR	32,500
RI	18,500
SC	4,100
TN	4,000
TX	63,800
VA	18,700
VI	28,000
WA	132,400
WV	3,000
National Total:	1,659,699 ft

Boom 19 to 41 Inches in Height

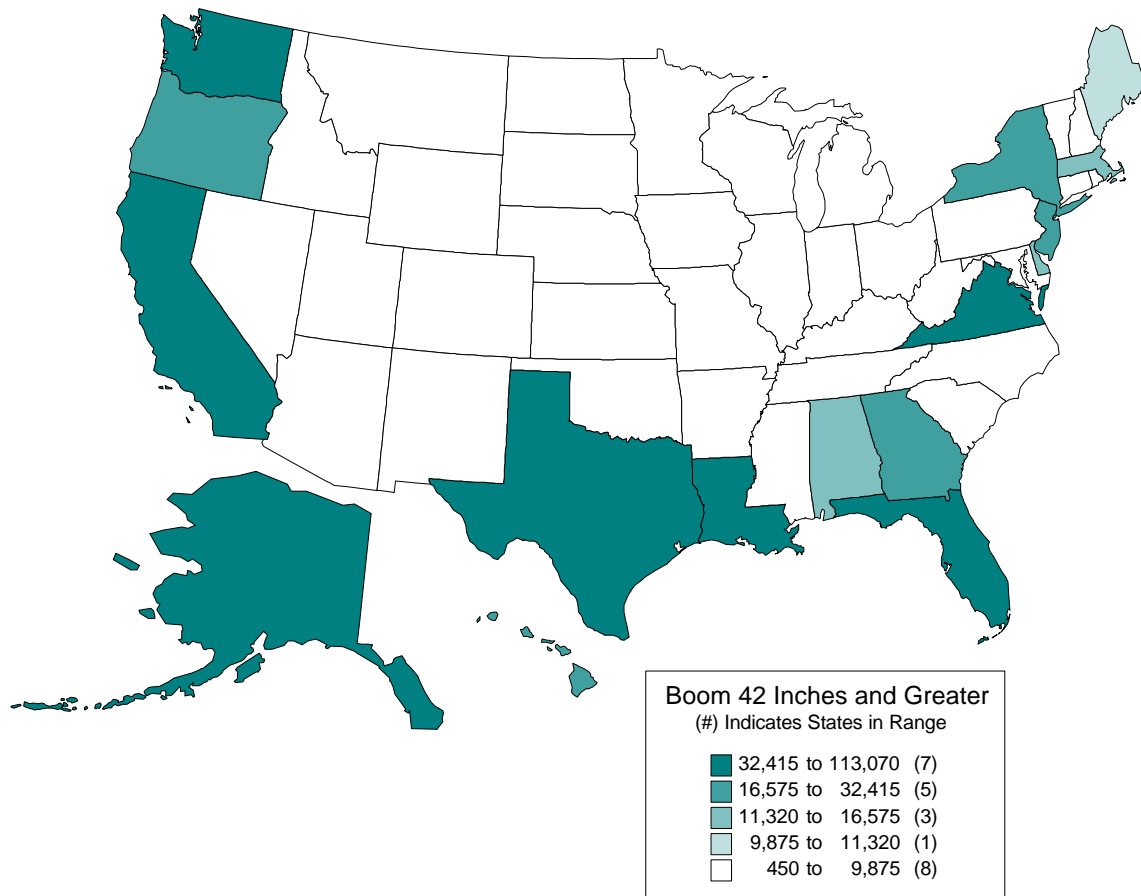


Boom by State, 42 Inches and Greater in Height

Totals are based on data as of February 1997.

State	Total Boom (ft)	Private Boom (ft)	Federal Boom (ft)
AK	92,338	82,766	9,572
AL	14,260	4,700	9,560
CA	113,070	87,666	25,404
CT	5,000		5,000
DE	14,332	14,332	
FL	44,863	29,251	15,612
GA	16,575	16,575	
Guam	60	60	
HI	27,593	18,021	9,572
LA	40,046	40,046	
MA	11,320	6,320	5,000
ME	9,875	9,875	
MI	5,000		5,000
MN	450	450	
MO	5,000		5,000
MS	4,460	4,460	
NC	3,520	3,520	
NJ	30,466	23,191	7,275
NY	24,500	24,500	
OR	25,831	15,631	10,200
PR	16,812	11,200	5,612
RI	4,620	4,620	
SC	5,000		5,000
TX	45,998	35,386	10,612
VA	32,415	6,295	26,120
VI	13,771	13,771	
WA	36,163	30,551	5,612
National Totals:	643,338 ft	483,187 ft	160,151 ft

Boom 42 Inches and Greater in Height



Temporary Storage

Information

Temporary Storage: Includes fixed tanks, frac tanks, tank trailers, storage bladders, portable tanks, and drums. **This section does not include totals for storage associated with vacuum systems or vessels. These totals are listed in their own respective sections.**

Number of Devices: Indicates the number of devices that were used to determine the total storage for each individual state.

Total Storage: Total of federal and private storage.

1 Barrel = 42 gallons.

Data includes storage in barrels (bbls) and number of devices available. The map graphically shows storage quantities in five color ranges, with darker colors indicating the highest storage totals and lighter colors indicating the lowest. The numbers in parentheses in the legend indicate the number of states which fall within each range. The red density dots provide a “feel” for the number of devices. The dot sizes are directly related to the actual number of devices available, and are different for each state. The legend shows three dot sizes (small, medium and large) for comparison. For example, if you look at the map, you will notice that Louisiana and Texas are in the same range for total storage, but Louisiana has a larger density dot (indicating more devices) than Texas. A simple conclusion would be that the total storage for Texas is made up of a few larger devices while Louisiana’s is made up of many smaller ones. This is verified by looking at the data sheet which shows Texas’ total number of devices at 303 and Louisiana’s at 1,569.

Temporary Storage by State

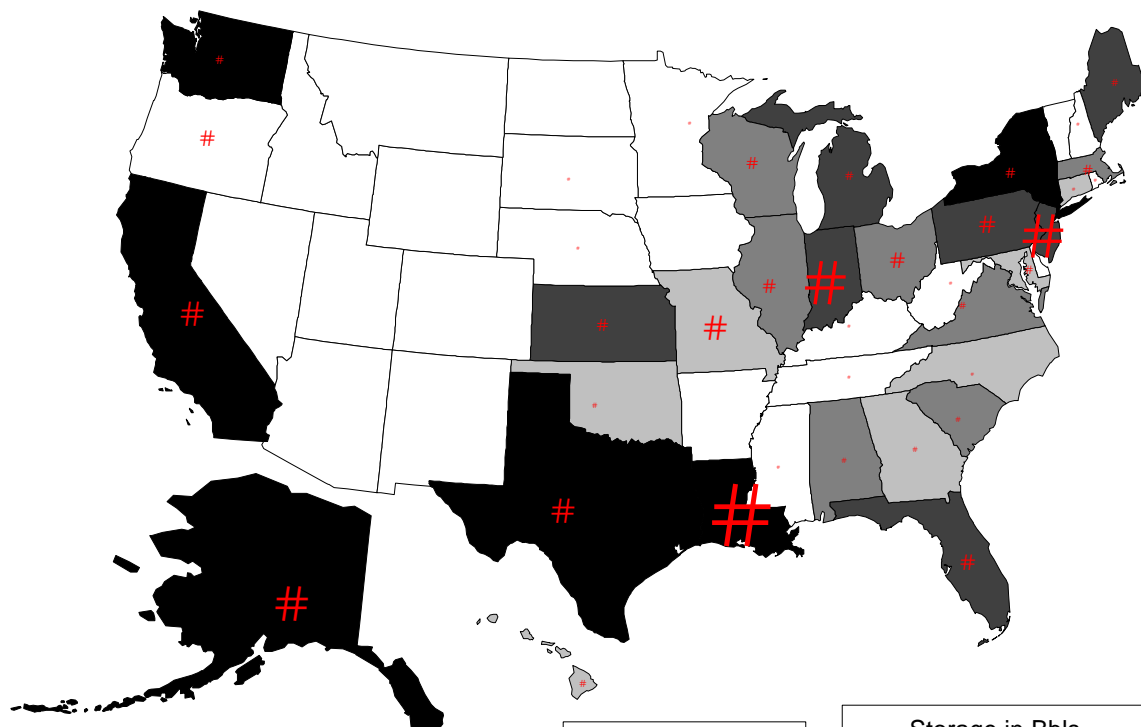
Includes Fixed Tanks, Frac Tanks, Tank Trailers, Storage Bladders, Portable Tanks, and Drums.
Totals are based on data as of February 1997.

State	Total Storage (bbls)	Private Storage (bbls)	Federal Storage (bbls)	Number of Devices
AK	169,501	152,448	17,053	575
AL	40,011	19,092	20,919	24
CA	617,282	581,357	35,924	317
CT	2,846	1,322	1,524	8
FL	77,556	72,984	4,572	128
GA	13,603	13,603		26
Guam	1,562	1,562		6
HI	9,416	6,825	2,591	35
IL	24,661	24,661		127
IN	54,009	54,009		827
KS	47,476	47,476		93
KY	786	786		13
LA	129,139	129,139		1569
MA	22,477	20,953	1,524	78
MD	15,988	15,988		47
ME	103,206	103,206		31
MI	77,418	75,894	1,524	45
MN	383	383		9
MO	6,578	5,054	1,524	312
MS	880	880		4
NC	6,060	6,060		13
NE	429	429		3
NH	24	24		1
NJ	76,167	62,390	13,777	849
NY	222,636	222,636		65
OH	20,520	20,520		138
OK	3,771	3,771		16
OR	1,744	220	1,524	131
PA	126,748	126,748		180
PR	7,164	5,640	1,524	42
RI	467	467		6
SC	30,287	28,763	1,524	23

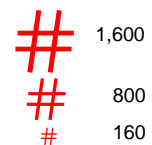
State	Total Storage (bbls)	Private Storage (bbls)	Federal Storage (bbls)	Number of Devices
SD	36	36		1
TN	1,590	1,590		13
TX	135,899	132,851	3,048	303
VA	44,605	19,348	25,257	40
WA	137,173	135,649	1,524	48
WI	16,310	16,310		81
WV	24	24		2
National	2,246,429 bbls	2,111,095 bbls	135,334 bbls	6,229 Devices

Temporary Storage In Bbls

Includes Number of Devices

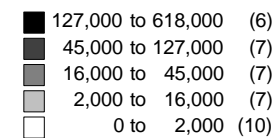


Number of Devices



Storage in Bbls

(#) Indicates States in Range



Vessel Storage

Information

Vessel Storage: Includes barges, Oil Spill Recovery Vessels (OSRVs), and any other vessels with storage capacity.

Number of Vessels: Indicates the number of vessels that were used to determine the total storage for the particular state.

Total Storage: Total of federal and private storage.

1 Barrel = 42 gallons.

Data includes storage in barrels (bbls) and number of vessels available. The map graphically shows storage quantities in five color ranges, with darker colors indicating the highest storage totals and lighter colors indicating the lowest. The numbers in parentheses indicate the number of states which fall within each range. The red density dots provide a “feel” for the number of vessels available. The dot sizes are directly related to the actual number of vessels available, and are different for each state. The legend shows three dot sizes (small, medium and large) for comparison. For example, if you look at the map, you will notice that Louisiana and Alaska are in the same range for total storage, but Louisiana has a larger density dot (indicating more vessels) than Alaska. A simple conclusion would be that the total storage for Alaska is made up of a few larger vessels while Louisiana’s is made up of many smaller ones. This is verified by looking at the data sheet which shows Alaska’s total number of vessels at 37 and Louisiana at 78.

No federal assets were recorded for vessels.

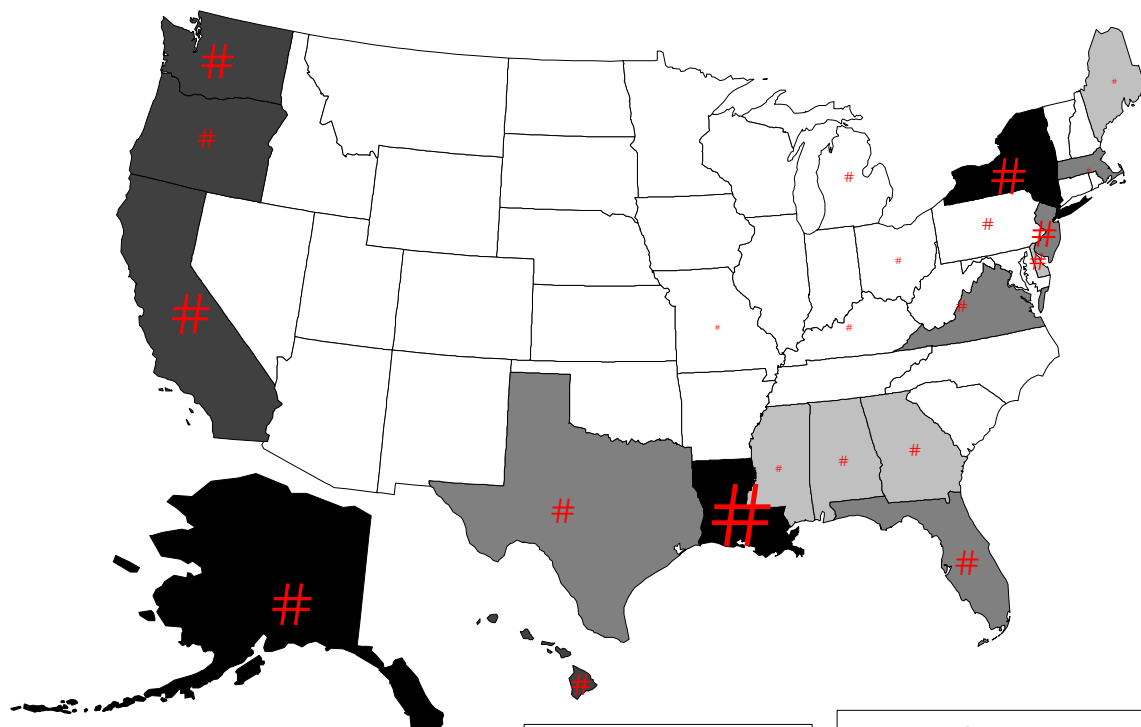
Vessel Storage by State

Includes Tank Barges, OSRVs, and any Vessels with Storage Capacity.
Totals are based on data as of February 1997.

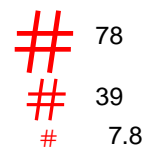
State	Storage Capacity (bbls)	Number of Vessels
AK	831,009	37
AL	10,007	3
CA	528,884	36
DE	47,865	8
FL	131,044	14
GA	49,600	4
HI	215,824	11
KY	5	2
LA	908,866	78
MA	62,000	1
ME	4,000	1
MI	19	3
MO	2	1
MS	41,600	2
NJ	74,385	16
NY	566,558	30
OH	26	2
OR	161,554	10
PA	480	4
PR	594,634	7
TX	134,693	15
VA	73,719	4
VI	45,200	4
WA	203,701	27
National Totals:	4,685,674 bbls	320 Vessels

Vessel Storage In Bbls

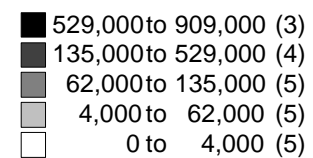
Includes Number of Vessels



Number of Vessels



Vessel Storage in Bbls (#) Indicates State in Range



Vacuum Systems

Information

Vacuum Systems: Includes vacuum trucks, tanks, and loaders.

Effective Daily Recovery Capacity (EDRC): Indicates the amount of oil that could be recovered in a 24 hour period based solely on the pumping capacity of the device. This figure also includes a derating factor of 20%, indicating that 20% of what is being pumped is oil and 80% is water. EDRC is converted from gallons per minute (gpm) to bbls per day using the following formula:

$$\text{EDRC} = [(\text{gal/min}) * (60 \text{ min/hr}) * (24 \text{ hrs/day}) * (\text{bbls}/42 \text{ gal})] * .20 \text{ derating factor}$$

Number of Devices: Indicates the number of devices that were used to determine the total storage for each individual state.

Total Storage/EDRC: Total of federal and private storage/EDRC.

1 Barrel = 42 gallons.

Data includes EDRC, storage, and number of devices available. The maps graphically show EDRC and storage quantities in five color ranges, with darker colors indicating the highest totals and lighter colors indicating the lowest. The numbers in parentheses in the legend indicate the number of states which fall within each range. The red density dots provide a “feel” for the number of devices available. The dot sizes are directly related to the actual number of devices available, and are different for each state. The legend shows three dot sizes (small, medium and large) for comparison. For example, if you look at the storage map, you will notice that Florida and Virginia are in the same range for total storage, but Florida has a larger density dot (indicating more devices) than Virginia. A simple conclusion would be that the total storage for Virginia is made up of a few larger devices while Florida’s is made up of many smaller ones. This is verified by looking at the data sheet which shows Florida’s total number of devices at 55 and Virginia’s at 22. Similar conclusions may be drawn from the EDRC map as well.

No federal assets were recorded for vacuum systems.

Vacuum Systems by State

Includes Vac Trucks, Vac Tanks, and Vac Loaders.

Totals are based on data as of February 1997.

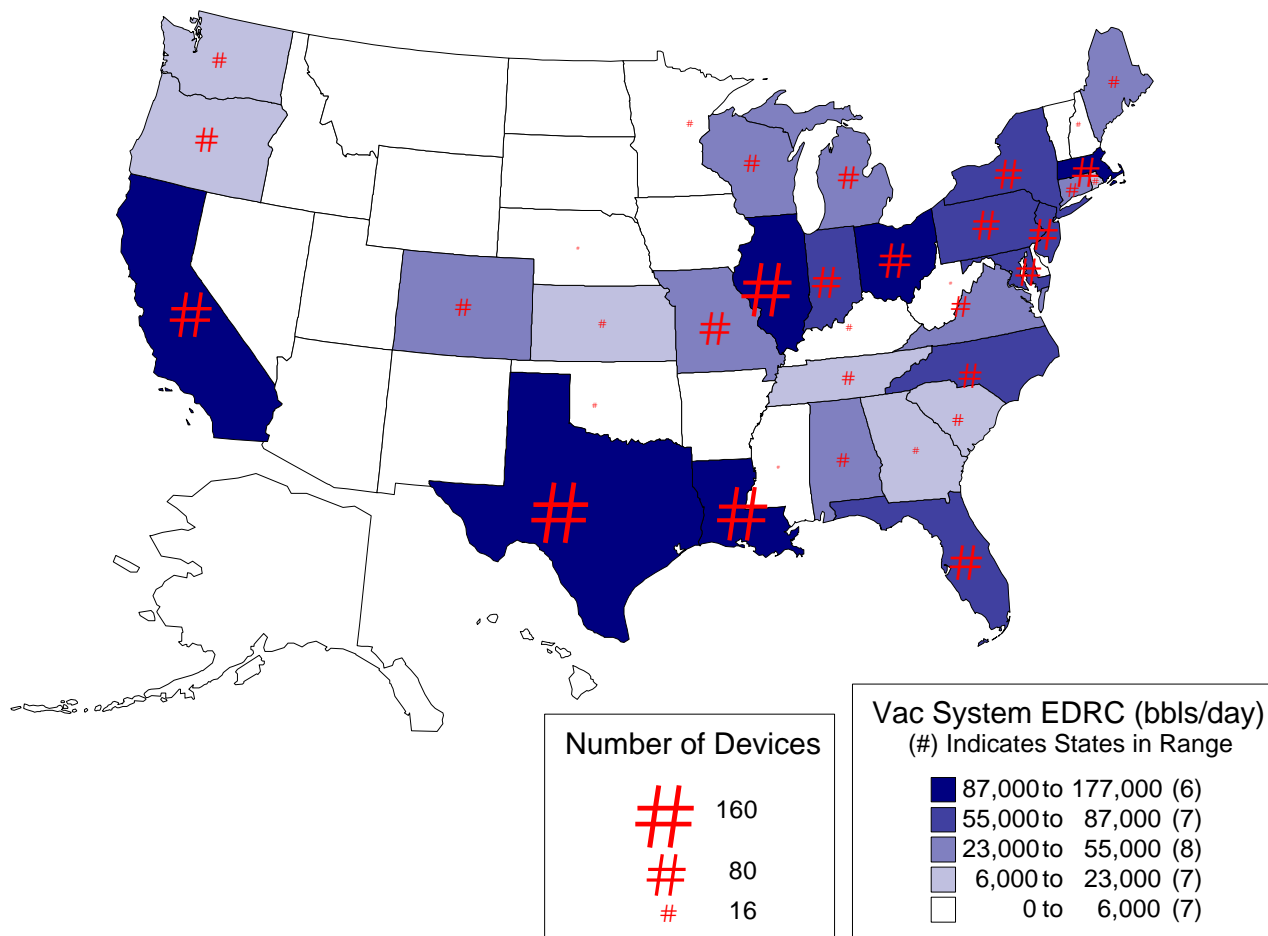
State	EDRC in bbls/day*	Storage in bbls	Number of Devices
AL	23,602	789	12
CA	113,445	9,712	92
CO	34,971	386	17
CT	29,486	1,214	11
FL	84,055	3,889	55
GA	6,000	262	3
IL	171,408	12,319	121
IN	86,894	5,529	48
KS	9,600	333	5
KY	4,800	333	3
LA	143,184	10,460	120
MA	101,417	4,923	44
MD	71,349	3,789	40
ME	23,486	800	10
MI	54,514	2,212	27
MN	2,379	244	4
MO	52,800	4,164	52
MS	7	38	1
NC	60,946	3,301	30
NE	2,400	131	1
NH	3,600	95	2
NJ	81,291	3,492	46
NY	73,474	3,609	45
OH	96,555	5,783	56
OK	3,627	88	2
OR	6,987	9,878	30
PA	55,680	4,440	44
PR	7,886	270	4
RI	7,543	381	4

State	EDRC in bbls/day*	Storage in bbls	Number of Devices
SC	19,886	845	10
TN	21,943	970	12
TX	176,983	14,435	151
VA	42,857	1,728	22
WA	9,154	619	15
WI	26,331	2,071	18
WV	1,029	24	1
National Totals:	1,711,570 bbls/day	113,557 bbls	1,158 Devices

Vacuum System Recovery Capacity (EDRC)

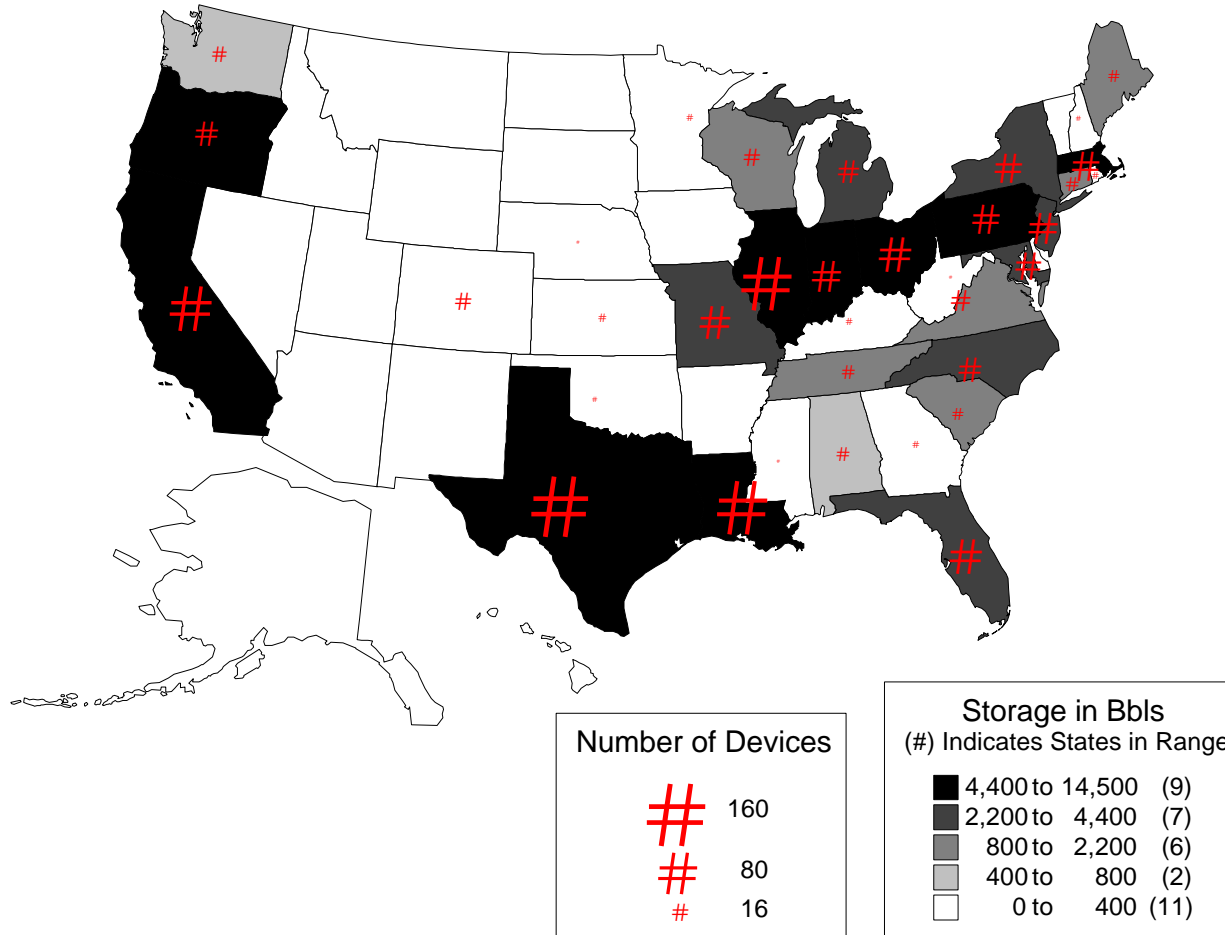
Effective Daily Recovery Capacity (EDRC) in Bbls/day

Includes Number of Devices That Make Up EDRC



Vacuum Systems Storage In Bbls

Includes Number of Devices



Skimmers

Information

Effective Daily Recovery Capacity (EDRC): Indicates the amount of oil that can be recovered in a 24 hour day based solely on the pumping capacity of the device. This figure also includes a de-rating factor of 20%, indicating that 20% of what is being pumped is oil and 80% is water. EDRC is converted from gallons per minute (gpm) to bbls per day using the following formula:

$$\text{EDRC} = [(\text{gal/min}) * (60 \text{ min/hr}) * (24 \text{ hrs/day}) * (\text{bbls}/42 \text{ gal})] * .20 \text{ derating factor}$$

Total EDRC: Total of federal and private EDRC.

1 Barrel = 42 gallons.

Data includes EDRC shown in (bbls/day) and number of devices available. The maps graphically show EDRC quantities in five color ranges, with darker colors indicating the highest storage totals and lighter colors indicating the lowest. The numbers in parentheses indicate the number of states which fall within each range. The red density dots indicate the number of devices available in each state. For example, if you look at the EDRC map, you will notice that Alaska and Florida are in the same range for total EDRC, but Alaska has a larger density dot (indicating more devices) than Florida. A simple conclusion would be that the total EDRC for Florida is made up of a few larger devices while Alaska's is made up of many smaller ones. This is verified by looking at the data sheet which shows Florida's total number of devices at 93 and Alaska's at 276.

Skimmers by State

Totals are based on data as of February 1997.

State	Total EDRC bbls/day*	Private EDRC bbls/day*	Federal EDRC bbls/day*	Number of Skimmers
AK	386,880	376,834	10,046	276
AL	48,062	42,919	5,143	20
CA	291,730	274,827	16,903	159
CO	5,122	5,122		5
CT	21,257	21,257		4
DE	34,869	34,869		10
FL	241,653	241,653		93
GA	38,386	38,386		14
Guam	7,893	7,893		8
HI	40,978	33,435	7,543	21
IL	8,263	8,263		9
IN	1,591	1,591		8
KS	23,259	23,259		30
KY	15,970	15,970		8
LA	306,247	306,247		170
MA	28,526	28,526		8
MD	34,574	34,574		21
ME	75,237	75,237		18
MI	6,247	6,247		5
MN	8,688	8,688		9
MO	25,618	25,618		29
MS	10,930	10,930		6
NC	2,277	2,277		3
NJ	102,425	97,282	5,143	33
NY	210,315	210,315		51
OH	18,624	18,624		15
OK	13,461	13,461		7
OR	40,683	37,255	3,429	35
PA	57,216	57,216		25
PR	55,913	55,913		12
SC	37,694	37,694		4
SD	411	411		1
TN	4,738	4,738		6

State	Total EDRC bbls/day*	Private EDRC bbls/day*	Federal EDRC bbls/day*	Number of Skimmers
TX	292,471	292,471		103
VA	101,527	84,590	16,937	82
VI	27,813	27,813		7
WA	137,671	134,242	3,429	63
WI	1,344	1,344		4
WV	1,817	1,817		2
National Totals:	2,768,379 bbls/day	2,699,808 bbls/day	68,571 bbls/day	1,384 Skimmers

Skimmer Recovery Capacity (EDRC)

Effective Daily Recovery Capacity (EDRC) in Bbls/day
Includes Number of Skimmers

